

Claims

- [c1] 1. A system for determining subscribers to which a published item of data should be replicated, the system comprising:
an interface module for receiving user input of lists of a plurality of subscribers, each list specifying items of data to be replicated to a given subscriber;
a build module for building an index based on the lists of the plurality of subscribers containing entries indicating subscribers for each item of data specified in the lists and a default list of subscribers for items of data not matching any of the entries; and
a resolution module for receiving a published item of data and determining subscribers to which the published item should be replicated based on the index.
- [c2] 2. The system of claim 1, wherein a subscriber comprises a replicate database.
- [c3] 3. The system of claim 1, wherein a published item of data comprises an item of data published by a primary database for replication.
- [c4] 4. The system of claim 1, wherein the lists of the plural-

ity of subscribers include a list specifying at least one item of data not to be replicated to a particular subscriber.

- [c5] 5. The system of claim 1, wherein the lists of the plurality of subscribers include a list comprising a negation set indicating that all data other than items specified on the list should be replicated to a particular subscriber.
- [c6] 6. The system of claim 1, wherein the interface module receives at least one string identifying data to be replicated to a subscriber.
- [c7] 7. The system of claim 6, wherein the build module builds the index based, at least in part, on said at least one string.
- [c8] 8. The system of claim 7, wherein the index includes an entry representing a particular item of data and at least one subscriber to which the particular item of data is to be replicated.
- [c9] 9. The system of claim 1, wherein the build module builds a hash table of entries based on the lists of the plurality of subscribers.
- [c10] 10. The system of claim 1, wherein the build module generates a bitmap string representing subscribers to

which an item of data is to be replicated.

- [c11] 11. The system of claim 10, wherein the bitmap string includes one bit for each subscriber.
- [c12] 12. The system of claim 1, wherein the build module builds an entry including a wildcard for indicating all items of data of a certain type should be replicated to subscribers of said entry.
- [c13] 13. The system of claim 1, wherein the build module builds a bitmap string representing the default list of subscribers.
- [c14] 14. The system of claim 13, wherein the build module adds each subscriber having a list comprising a whole set to the bitmap string representing the default list of subscribers.
- [c15] 15. The system of claim 13, wherein the build module adds each subscriber having a list comprising a negation set to the bitmap string representing the default list of subscribers.
- [c16] 16. The system of claim 1, wherein the resolution module generates a hashed value based on at least one string identifying the published item.
- [c17] 17. The system of claim 16, wherein the resolution mod-

ule searches for the hashed value in the index.

- [c18] 18. The system of claim 17, wherein the resolution module determines subscribers to which the published item should be replicated based upon at least one entry in the index including the hashed value if the hashed value is found in the index.
- [c19] 19. The system of claim 17, wherein the resolution module determines subscribers to which the published item should be replicated based upon the default list if the hashed value is not found in the index.
- [c20] 20. The system of claim 16, wherein the resolution module receives a plurality of strings identifying the published item and substitutes a wildcard for one of the strings to search for matching entries in the index which include a wildcard.
- [c21] 21. The system of claim 1, wherein the resolution module determines subscribers to which the published item should be replicated based upon the default list of subscribers for published items without matching entries in the index.
- [c22] 22. The system of claim 1, wherein the build module removes a subscriber from the index in response to a request to remove a subscriber.

- [c23] 23. A method for determining subscribers to which a published item of data should be replicated, the method comprising:
- receiving lists of a plurality of subscribers, each list specifying items of data to be replicated to a given subscriber;
 - building an index based on said lists of the plurality of subscribers containing entries indicating subscribers to which each item of data specified in said lists should be replicated and a default list for indicating subscribers to published items of data not matching any of the index entries;
 - given a published item of data, determining whether the published item matches at least one entry in the index;
 - if the published item matches at least one entry, generating a set of subscribers to which the published item should be replicated based on the subscribers associated with said at least one entry; and
 - otherwise, returning the default list of subscribers to which the published item should be replicated.
- [c24] 24. The method of claim 23, wherein a subscriber comprises a replicate database.
- [c25] 25. The method of claim 23, wherein a published item of data comprises an item of data published by a primary

database for replication.

- [c26] 26. The method of claim 23, wherein said receiving step includes specifying items of data not to be replicated to a subscriber.
- [c27] 27. The method of claim 23, wherein said receiving step includes receiving a list comprising a negation set indicating that all data other than items specified on the list should be replicated to a subscriber.
- [c28] 28. The method of claim 23, wherein said receiving step includes receiving at least one string identifying data to be replicated to a subscriber.
- [c29] 29. The method of claim 28, wherein said building step includes building a hash table based on said at least one string.
- [c30] 30. The method of claim 29, wherein said step of building a hash table includes building a bitmap string for each entry representing subscribers to an item of data.
- [c31] 31. The method of claim 23, wherein said building step includes building a hash table of entries.
- [c32] 32. The method of claim 23, wherein said building step includes generating a bitmap string representing subscribers to an item of data.

- [c33] 33. The method of claim 32, wherein said step of generating a bitmap string includes generating a bitmap string having one bit for each subscriber.
- [c34] 34. The method of claim 32, wherein said step of generating a bitmap string includes removing a subscriber from the bitmap string representing subscribers to an item of data if the subscriber has specified the item of data as an excluded item in a negation set.
- [c35] 35. The method of claim 23, wherein said building step includes building a bitmap string for representing the default list of subscribers.
- [c36] 36. The method of claim 35, wherein said step of building a bitmap string for representing the default list of subscribers includes adding each subscriber having a list comprising a whole set.
- [c37] 37. The method of claim 35, wherein said step of building a bitmap string for representing the default list of subscribers includes adding each subscriber having a list comprising a negation set.
- [c38] 38. The method of claim 23, wherein said building step includes building entries including a wildcard for indicating all items of data of a certain type should be repli-

cated to a subscriber.

- [c39] 39. The method of claim 23, wherein said determining step includes generating a hashed value based on at least one string identifying the published item.
- [c40] 40. The method of claim 39, wherein said determining step includes searching for the hashed value in the index.
- [c41] 41. The method of claim 38, wherein said determining step includes receiving a plurality of strings identifying the published item and substituting a wildcard for one of the strings to search for matching entries in the index which include a wildcard.
- [c42] 42. The method of claim 23, wherein said determining step includes building a list of subscribers based upon a plurality of matching entries.
- [c43] 43. A computer-readable medium having processor-executable instructions for performing the method of claim 23.
- [c44] 44. A downloadable set of processor-executable instructions for performing the method of claim 23.